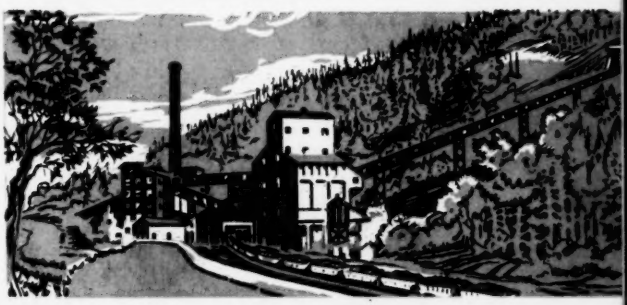
JOURNAL of GEOGRAPHY

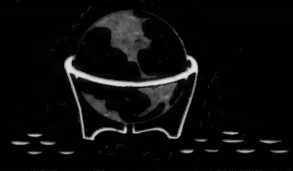
for Teachers of
ELEMENTARY,
HIGH SCHOOL
and COLLEGE
GEOGRAPHY

Volume LIII

February 1954

Number 2





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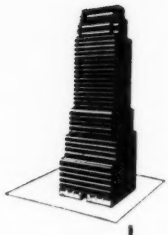

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Mrs. Dragon did her undergraduate work at Valparaiso University, Valparaiso, Indiana, and took her Master's Degree at the University of Michigan. She has also done graduate work at the University of Minnesota and the University of Wisconsin. She has taught junior high school social studies (government and geography history) in Kansas, Wisconsin, Ohio and for the last eight years at Woodworth Junior High, Dearborn, Michigan. This article is based on a field study in Mexico during the summer of 1950.

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Miss Svec is now president elect of the NCGT after serving as secretary and in many other capacities. She has published numerous articles in the JOURNAL based on classroom experience and travels abroad.

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Contents of the JOURNAL are indexed regularly in the *Educational Index to Periodicals.*
Authors alone are responsible for opinions and statements in the JOURNAL.

PRINTED IN THE U.S.A.

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The JOURNAL is the official organ of the National Council of Geography Teachers and is sent to all members. The annual dues, $4.00, are payable to the JOURNAL OF GEOGRAPHY. Extra postage rates for copies sent to foreign countries should be added to the membership dues. Make all remittances payable to the JOURNAL OF GEOGRAPHY, in postal or express money orders or bank drafts.

Send manuscript and books for notice or review to the Editor.
Send orders for back numbers to JOURNAL OF GEOGRAPHY.

Published monthly except June, July and August

PUBLICATION OFFICES: 450-454 AHNAIP STREET, MENASHA, WISCONSIN

Business Correspondence, Membership Dues, and Subscriptions may be sent to Publication office or to

A. J. NYSTROM AND COMPANY
PUBLISHERS, JOURNAL OF GEOGRAPHY
3333 ELSTON AVENUE, CHICAGO 18

Entered as second-class matter January 15, 1919 at the post office of Menasha, Wisconsin under the Act of March 3, 1879

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VOLUME LIII FEBRUARY 1954 NUMBER 2

MEXICAN HENEQUEN

The Growth and Decline of a Fiber Monopoly

ROSALINE GROSZ DRAGON
Woodworth Junior High School

A combination of physical, historical, economic, political and social geographic factors caused the growth of the Mexican monopoly in sisal production and created the conditions of competition leading to its breakdown. Examining the world statistics of sisal production, it is evident that the western hemisphere has again lost to the eastern hemisphere the lead in a monopoly following the pattern of previous western losses in rubber, cacao and quinine production.

LOCATION

Mexico's commercial sisal (henequen) industry is located in two widely separated areas. On the low, tropical, coastal plain of the peninsula of Yucatan, the plantations are concentrated in the states of Yucatan and Campeche. Merida, the commercial center for the fiber industry is connected by rail with Progreso, the main exporting port. The second area, extending across the Tropic of Cancer in the northeastern coastal plain, is in the state of Tamaulipas. Its main center of business is Cuidad Victoria and its exporting city is Tampico (Fig. 1).

PHYSICAL CHARACTERISTICS

The frost-free Yucatan region is semi-arid, altho in the tropics, experiencing a long, dry season. The 30″-40″ rainfall from June to October is ineffective because of evaporation under intense tropical sun and the rapid percolation of water into the soil and porous limestone rock underlying the peninsula. Both Yucatan and Tamaulipas are classed as *BSh* climatic type, that is, tropical and subtropical steppe with a narrow margin of *AW* climatic type, that is, tropical savanna, on the south.[1]

[1] J. Paul Goode, World Climatic Regions, *School Atlas*, 1950, 8-9.

FIG. 1. Map: Mexico: Henequen Production, 1941.

The natural vegetation type of the two regions is designated by W. W. Kuchler as *Ds* and *GDsp,* that is, broad-leaf deciduous, shrubform, minimum height 3′, growth singly or in groups or patches.[2] This, of course, describes the drought resistant henequen plant characteristic of these regions.

SISAL PRODUCTION

Since sisal cannot be grown profitably on a small scale due to the low fiber yield per plant, at least 300-500 acres are required for a fair return. This acreage identifies the industry with plantation agriculture found in both Yucatan and Tamaulipas.

The Mexican sisal is easily distinguished from other types of agave by its pineapple-like trunk from which radiates grayish-green leaves bearing a spiny tip and marginal prickles. The leaves vary from 3′ to 7′ in length with tough fibers running the length of the leaves (Fig. 2). The life of the plant is a period of 15 to 25 years; after it shoots up from its center a tall, flowering stalk, it dies.

[2] J. Paul Goode, Natural Vegetation, *School Atlas,* 1950, 16-17.

FIG. 2. Mexican Sisal (Henequen). Long, tapering, fibered leaves edged with thorns and a 1″ terminal spike grow in a rosette from the top of the "trunk." Plantation in area of Ciudad Victoria, Tamaulipas, Mexico.

Altho a semi-mechanized industry, the original planting requires much hand labor. Approximately 1,000 young plants per acre are set out in single rows 4′-10′ apart, depending upon the condition of the soil. After 5 to 7 years growth (this varies from place to

FIG. 3. Henequen plantation. Production unit: field of fiber in the background, the processing plant and the bleaching fiber.

place) the first leaves are cut yielding 10-15 leaves; this yield continues, thereafter, for 10-20 years depending upon the care given to the plants. Year around harvesting on a plantation is accomplished by having fields at different stages of growth. Careful cutting prolongs the life of a plantation. Replantings are not required more than once in 15-20 years. The crop needs no irrigation and practically no cultivation; the area in Tamaulipas has more of a problem of weed eradication than drier Yucatan.

The lower mature leaves are cut, one at a time, with a machete about every six months. Successive cuttings add to the length of the "trunk." Eventually the leaves are produced at the height of a man's head. The best plants average 250 leaves during their lifetime.

The leaves are tied in bundles of 40-50 leaves; each leaf weighs between 1-2 pounds. In Tamaulipas bundles are carried to the end of rows, stacked, and later picked up by a truck which delivers them to a mill. However, in Yucatan miles of tramways deliver the leaves to the "Central"; in Africa also narrow gauge rails are laid between fields and mill.[3] Leaves are thrown in a pile before being transferred to the processing machine.

Previously the scraping of the leaves was done with crude tools and excessive manual labor; the leaves today pass thru a decorti-

[3] J. D. Krivine, "Sisal Production in East Africa," *Canadian Geographical Journal*, July, 1948, 29.

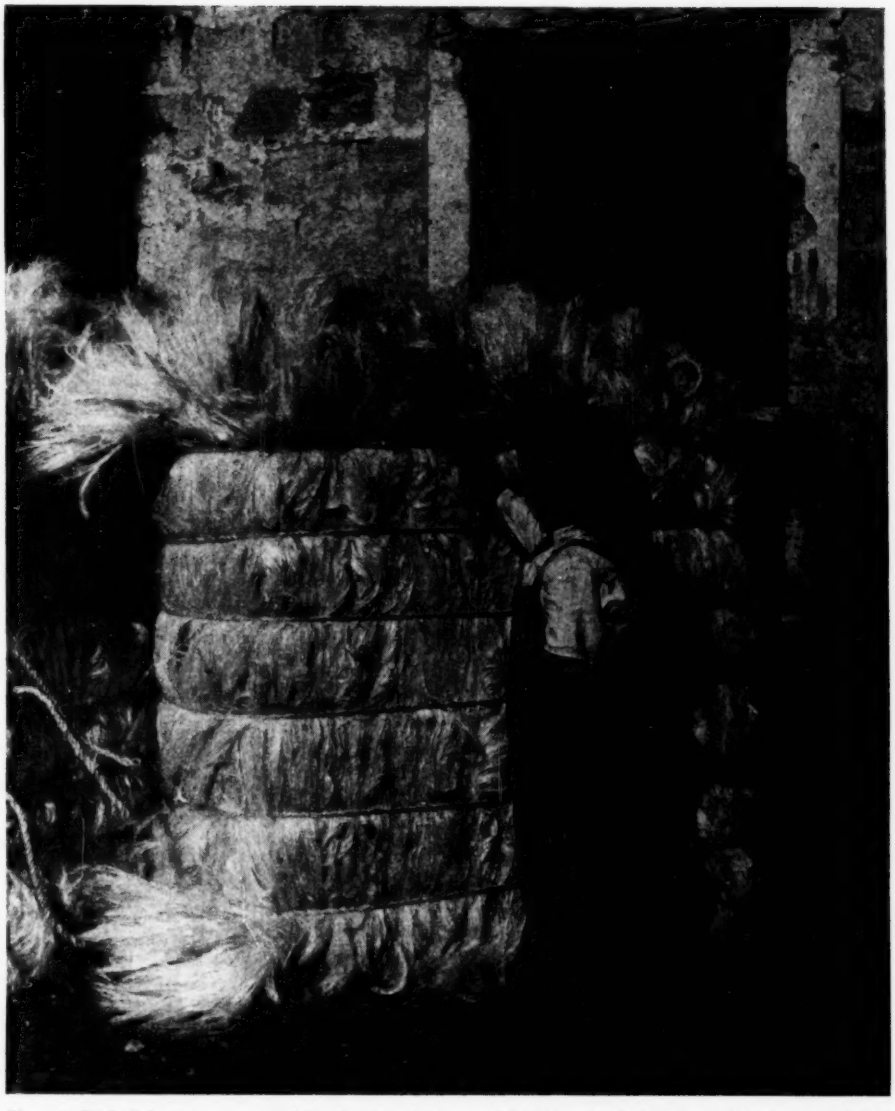

FIG. 4. Baled henequen outside the brushing and baling shed. Bales weigh from 375-500 pounds. Small henequen ropes are used to bind the fibers.

cator which separates the fibers by beating, scraping and washing them. The leaves are automatically carried down a shaft to a carrier-pole where Mexican laborers are waiting. Two laborers lift the pole shoulder-high and carry the fibers to the drying fields where the fibers are spread on wires strung from low supports (Fig. 3). After drying and bleaching under the tropical sun for 6-20 hours,

the laborers gather the fiber and take it to the brushing and baling plant. Using small henequen ropes for binding, the fiber is baled into 375-500 pound bales (Fig. 4).

An increasingly important problem of the sisal industry is the waste material which remains after the fiber is scraped from the leaves. Disposing of this involves much labor, time, and transportation.

This, essentially, is the basic method of Mexican sisal production and is characteristic of most sisal plantations. Numerous production operations in need of improvement are evident and the way they are solved will signify the progression or retrogression of this industry in world competition.

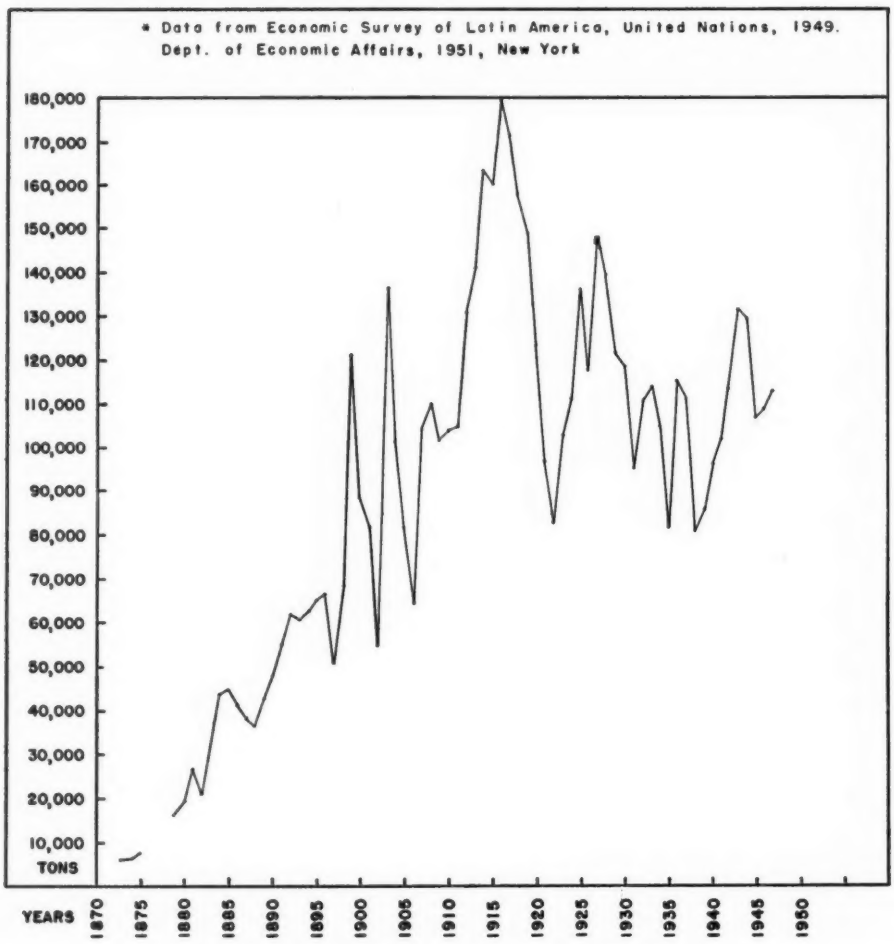

FIG. 5. Mexican Henequen Production 1873-1947.

TABLE 1*

PRODUCTION OF SISAL IN MEXICO SINCE 1911

Years	World Production	Mexican Production	% Produced by Mexico
1901		105,600	100%
1902		108,000	"
1903		123,633	"
1904		126,243	"
1905		128,366	"
1906		123,182	"
1907		127,964	"
1908		137,452	"
1909		118,768	"
1910		127,348	"
1911	172,100	146,100	85%
1912	195,230	169,230	86%
1913	207,019	181,019	87%
1914	231,086	205,086	88%
1915	211,109	186,109	87%
1916	243,300	217,300	89%
1917	195,796	165,100	84%
1918	210,390	160,640	76%
1919	176,320	143,465	81%
1920	223,133	187,063	83%
1921	143,657	113,657	78%
1922	122,138	92,138	73%

* Data from the United States Bureau of Foreign and Domestic Commerce, No. 200, Trade Information Bulletin. 1924.

Because it is a large scale, capitalistic enterprise, large plantations control any small production where the individual planter cannot invest in the expensive processing machinery. The nature of the crop tends to make it highly speculative since many economic changes can occur from the time of planting until the first harvest. The long period of growth increases difficulty in predicting a balance between production and future needs; this tends to influence the price or open it up to influence or artificial control. Dependent upon a one-crop economy, any fluctuation in prices downward would work havoc with the native's marginal subsistence livelihood. Improvement in mechanization of the processes of loading, unloading, bleaching fibers, and disposal of wastes (or uses for it) would increase the quality of the product and the efficiency of operation.

In spite of the above mentioned handicaps in sisal production the statistics indicate a steady growth of henequen production from 1873 to 1947 with occasional fluctuations (Fig. 5).

Further figures indicate that Mexican sisal production was 100 per cent of the world's production until 1911. Gradually the percentage of Mexican production decreased (Table 1). What combination of factors caused Mexico to lose its monopoly of 100 per cent

production in 1911, on the one hand, and still show an increase and levelling off of tonnage on the other? For an answer to this question a look at world conditions, especially developments in the United States, may provide some insight into this problem.

HISTORIC DEVELOPMENT

History reveals that Maya Indians first used sisal leaves and mud for building materials. They discovered its fibrous qualities much later. The crop received a new stimulant when the Royal Spanish Navy was searching for a rope fiber in 1783.[4] However, the crude methods of production limited its availability and by 1821 Spanish interests were limited when the Spanish Empire was lost.

The Monroe Doctrine in 1823 turned the United States' interest to lands south of it. Increase in world trade, especially the Clipper Ship era of 1845-1860, stimulated demands for rope fibers. From the Orient ships returned with cargoes of Manila hemp for rope manufacturing companies. The great distance from the source of Manila hemp increased its cost to the manufacturer. To cut down these costs, some rope manufacturers began to import henequen in larger units and adulterated the hemp rope with the cheaper fiber. Because the Yucatan supply was insufficient to meet this new demand, attempts at introducing Mexican sisal into Florida and Cuba occurred between 1836-1840.

The revived whaling industry in 1844-1855 and the discovery of oil in the United States in 1859 increased demands for more varieties of rope. Opening of western land in the United States by the Homestead Act in 1862 opened markets for types of rope and twine for farms and ranches.

In spite of these many new markets, henequen production was limited, not by the lack of ability of the land to produce but by the slow method of obtaining the fiber from the leaves. Crude hand-tool production was 6-9 pounds per day.[5] Eventually an improved hand machine cleaned about 3,000 leaves or 180 pounds of fiber in 10 hours.[6] About 1892 another new machine was introduced which increased production to 50,000 leaves or 3,000 pounds of fiber per day.[7] Still another machine in 1917 claimed to handle 70,000-150,000

[4] E. H. Thompson, "Henequen—The Yucatan Fiber," *National Geographic Magazine*, April, 1903, 150 ff.

[5] E. H. Thompson, *op. cit.*

[6] Thomas J. McLain, "Fiber Cleaning Machine in the Bahamas," *Scientific American*, January 2, 1892, 3.

[7] Ernest E. Weir, "How Rope is Made," *Scientific American*, July 7, 1917, 6-7.

leaves per day. A new decorticator in 1929 increased this to 13,000 leaves an hour.[8] These new machines, however, were introduced after the henequen industry began on a commercial scale in 1873.

It is commonly thought that the invention of the McCormick reaper was the chief stimulus to the development of the Mexican sisal monopoly. This was not true at first because the early reaper did not use binder twine. Hand tying using the grain itself and hemp twine were common methods. In 1870 a self-binding reaper used wire which proved unsatisfactory. By 1880 an automatic reaper using binder twine was marketed. Checking the data these facts concerning the increased production after 1879 are substantiated. Reasons for increased demand from the United States is seen from the following figures.

VALUE: Farms and Machines[9]

	1860	1880	1890
Number of farms	2,044,077	4,008,907	4,564,641
Value of farm implements	$246,118,141	$406,520,055	$494,247,467
Wheat production in bushels	173,104,924	498,549,868	399,262,000

Thus it was not the original invention of the McCormick reaper that stimulated henequen production but the automatic self-binding reaper several decades later.

The Spanish-American War in 1898 created an interruption in the supply of Manila hemp from the Philippines. Consequently, other fibers, including henequen, received a sudden brief stimulus in 1899 from this war situation (Fig. 5).

GOVERNMENT CONTROLS

During the regime of Diaz (1877-1911) foreign nations were encouraged to make investments in Mexico. Several United States companies who had already had great controls over henequen export increased their strength by adding a monopoly on the binder twine source to their control of the world market in machinery. In order to counteract that monopolistic move, Germany planted Mexican sisal in German East Africa.[10] (This, of course, aided her plans for supplying an expanding German Navy.)

About 1900 henequeneros, encouraged by United States com-

[8] ———, "A New Decorticator," *Engineer*, August 23, 1929, 195-196.

[9] A. M. Schlesinger, *Political and Social History of the United States* (New York: 1930), 276.

[10] Carlo de Fornaro, "Yucatan and the International Harvester Company," *Forum*, September, 1915, 340.

panies, increased their plantings. They took steps to prevent the export of the plantstock in order to keep control of the market.[11] This move was a belated attempt at control since Mexican sisal had been introduced into Florida, the Bahamas, Cuba, German East Africa, Java and Puerto Rico. Production in these areas by 1911 helped to break the 100 per cent monopoly the Mexican planters had maintained (Table 1).

By 1912 the planters realized the outcome of huge plantings would be low prices. A group conceived the idea of regulation. *The Comision Reguladora de Mercado de Henequen of Yucatan* was organized in 1914. Unfortunately it shortly became a tool for unscrupulous politicians.

General Alvarado, who became the military governor of Yucatan saw in the *Reguladora* a chance to gain monetary support for the regime thru an already respectable source. He took over the *Reguladora* and forced a corporation on the people.[12] This corporation was financed by two American bankers who were to corner the market on henequen and receive a flat rate of $4.00 a bale. (All of this conniving was at the expense of the American farmer who bought the binder twine.)

With the blessings of the Carranza government, the Mexican revolutionists manipulated the market pushing the price of fiber from 7¢ up to 19¢. The leading United States purchasing company who virtually held a monopoly on sisal production before the *Comision Reguladora* existed, objected to the new monopoly the revolutionary government imposed over their economic control. After World War I United States companies forced the prices of henequen down from 20¢ to 2¢ on the basis of existing war surpluses.

More government control in the form of a semi-monopoly—*the Cooperative Society of Henequen Producers of Yucatan*—discouraged former customers. The United States imported from Mexico 47 per cent of its sisal supply in 1930 and the balance from Cuba, East Indies, and elsewhere.[13] Brazil increased production from 1939 to 1947 when it became self-sufficient in fiber.

By 1938 Mexican production reached its lowest mark since 1899 and 1906 and was surpassed by the new leader—British East Africa (Table 2).

[11] ———, *World Fiber Supply* (Washington, D.C.: 1947), 140.

[12] Wallace Thompson, *Trading With Mexico* (New York: 1921), 159-195.

[13] ———, "Intervention in the Henequen Industry," *Pan American Union*, July, 1933, 584-585.

TABLE 2*

WORLD PRODUCTION OF SISAL FIBER
(thousands of tons)

Year	Sisal							Henequen			
	British East Africa	Haiti	Brazil	Port. Africa	Indonesia	Other	World Total	Mexico	Cuba	Other	World Total
1934–38	117	6	—	20	75	9	226	95	13	3	110
1939	134	7	—	17	96	7	263	84	15	3	102
1940	130	8	—	17	88	5	248	95	16	5	115
1941–45 ave.	130	10	3	25	40	8	216	115	12	4	131
1946	134	18	9	33	7	5	205	106	14	3	123
1947	134	22	15	26	—	3	200	115	13	2	130
1948	157	30	25	33	5	12	262	121	13	3	137
1949	160	30	32	37	2	16	276	102	16	4	122
1950	163	34	49	39	5	14	304	96	15	3	115
1951	162	31	39	41	4	10	288	89	15	2	105

* Data from the *Commodity Yearbook*, 1952. Commodity Research Burea, New York.

A number of factors hastened the breakdown of the monopoly. The attempt of government control by high prices defeated its own ends. The spread of sisal production resulted in a world-wide distribution.

Locally, Mexican agrarian reforms forced large estates to sell land to the government for redistribution to peons. Breaking up henequen plantations affected production during the reorientation period.

It was believed the events created by World War II, when the Philippine and the East Indian production was interrupted, might give the henegueneros another chance. Statistics show an increased production following 1938 and a few years after the war but a decrease again in 1950 and 1951 when British East African production had increased.

AFRICAN COMPETITION

To recover its lead, Mexican planters will have to recognize the production advantages of British East Africa. They have to compete with the following:

1. The large plantation—thousand acre units in British East Africa in comparison to the breakdown of the Yucatan plantation to 300-500 acres, more or less. (5,000 acres are needed to keep machinery-unit of a plantation operating.)
2. The large market with the sterling area of the British Commonwealth and Empire. The British Board of Trade establishes prices. Stability enables industry to equip itself effectively.[14]
3. The technical superiority and capable management of plantations.
4. The easier marketing of sisal because of its greater strength and better spinning character than Mexican sisal.

[14] J. D. Krivine, *op. cit.*, 35.

5. Better production of fibers free of marginal spines.
6. Encouragement of experiments in new uses for fiber and the waste. A special plant for handling sisal leaf waste operates near Thika-Nairobi, Kenya.[15]

This appears to be a formidable list of competing problems to overcome. The ability of the Mexican sisal industry to recapture some of its vitality will depend also upon the speed of recovery of abaca and sisal plantations in the Philippines and the East Indies, respectively.

CONCLUSION

The sisal, or henequen, industry needs a determined effort to improve production methods, to improve grade of fiber, to produce new machines for processes not now mechanized (such as a drying machine for the fibers), and to obtain support from a stable government. All of these may help to produce more gleaming, golden threads and put a few silver coins into the poor henequeneros' pockets.

[15] ———, "New Uses For Sisal Waste," *Foreign Commerce Weekly*, September 19, 1949, 36.

THREE LESSONS IN MAPPING

M. MELVINA SVEC
State University Teachers College, Oswego

Since children learn by doing, a few projects in map making and map interpretation give pupils a better understanding of how maps tell their story. Experiences in the know-how and the acquisition of some skill with maps help pupils to grow in the ability to read information from maps. Some simple projects will be described in a series of three lessons. There are sure to be pupils in every group who will profit by these activities.

LESSON I. MAP ENLARGEMENT

Oftentimes a larger map is needed in the classroom than is readily available. Committees working on a project may wish to map their findings for a class report. An entire class may undertake an activity requiring a wall size map. When facilities in a school are limited, how may a map be enlarged?

Materials. The tools needed for a simple enlargement by means

of a grid are: 1. small piece of tracing paper. If the completed map is to be desk size, then start with tracing sheet about 3 inches by 4 inches. If the completed map is to be wall size, tracing paper 8 inches by 11 inches is practical; 2. a hard lead pencil with a sharp point, and 3. large sheet of paper the size of the desired finished map. Wall paper, kraft wrapping paper and other large pieces may be pasted together for a very large map. Even the paper sack used by the dry cleaner is useful.

Choice of Area to be Mapped. Select the state, country, island or continent that is to be enlarged. Usually an atlas or textbook will have a map to fit the size of the tracing paper to be used. The choice of the land mass should be reasonably correct in shape and area. This means that the projection needs to be examined. For example, do not trace the pattern for Australia that is as distorted as it appears on the north polar projection of the world. Enough of the adjoining land and water mass should be included so that the finished map does not float in space but looks as if it were a part of a larger unit. For example, a tracing of South America would include some of adjoining Central America and possibly some of the larger islands of the West Indies.

Details of the Outline. In making a small tracing, it is advisable to study a larger map of the area to observe the details of the coastline and boundaries. As you trace the pattern later, you will be aware of where the finer points of the outline should be noted. If too roughly traced, errors become grossly exaggerated and magnified on the enlarged copy.

The Tracing. Place the tracing paper over the selected area and fix it in place by means of paper clips, tape, or by the use of a guide line to show where the paper should always fit. Hold the pencil in an upright position and start tracing. The upright position of the pencil gives clear-cut lines which show details that would be obscured by broad lines. Use the standard symbols to represent boundaries, rivers, and other data. For example, a solid line around a country might mean that it is entirely surrounded by rivers, a highway or some other cultural feature. Extend the lines of lands to the margins of the paper. In this way, the lack of a margin makes the map look as if it were a part of the globe and not a picture with a map in a frame. Children have said, "Why it looks as if I pealed it right off the globe!"

The Grid. After the pattern is traced, with light fine lines, square

off the mapped area with quarter inch squares by drawing lines horizontally and vertically on the small paper. Use a sharp hard pencil so as not to clutter up details on the pattern. However, if a larger tracing is made, then half inch or perhaps one inch squares will be suitable.

Now the large sheet for the finished map needs to be squared off. Start by counting off the number of squares covered by the actual mapped area in length and width on the pattern. Make the squares on the large sheet as large as possible so that the completed map fills most of the paper. For example, if the pattern covered 8 quarter-inch squares one way and 11 quarter-inch squares the other direction, then on a paper 18 inches by 24 inches a two inch square will be suitable. To check, note that $2 \times 8 = 16$; and $2 \times 11 = 22$; thus the map is well within the size of the large sheet.

Copying the Pattern. After the large paper has been squared off, copy your pattern freehand, using the corresponding number of squares and location of lines within and across the grid lines as guides. Try to avoid a scallop effect, vibrating lines for coastlines and irregularities in boundaries. Later re-do the outline in some crayon or ink that gives carrying power and better visibility.

Completing the Map. Letter the names of the major land and water features. The choice of the size and style of lettering helps to organize this information. For example, block letters for the names of countries, and a manuscript style for water bodies give readable contrast. Add whatever data is desired, depending upon the purpose for which the map has been made.

Blackboard Use. Such enlargements, when made on paper almost blackboard size, serve as a duplicator. Merely use a compass point or a large needle and punch perforations along the outline. Hold the pattern on the blackboard and with a dusty eraser pat over the outline. When you remove the master sheet, enough of the outline shows so that with a few quick strokes of chalk you have the shape of the land area for use on the blackboard. This saves the time of marking off a grid to reproduce a map everytime you want to use that area.

Values. Children in a fifth grade so enjoyed this project that they looked for opportunities to make maps. For the teacher, the use of this device provides a collection of visual-aid maps that otherwise might not be at all available for her classroom.

Next month: Lesson II. Profiles from Maps.

GRADE SIX MAKES A WORLD MAP

CATHERINE HAUER
East Meadow Public Schools

The overcrowded schools, in a rapidly growing community, resulted in a shifting of many upper grades to a larger but inadequate equipped building. We found ourselves sharing rooms without sufficient books and teaching aids such as library books, maps or a globe. Since our program included a study of the world we realized the need of some maps, or at least a map of the world. None were available and it seemed unlikely we would get any for some time. The class and I joined together in discussing our problem and the following project resulted.

It was suggested that we draw a map of the world on the bulletin board. Many children had brought in stamps and interest in them ran high. One of the children suggested filling in the countries with their stamps. The response to this was overwhelming and in the next week hundreds of stamps arrived. Our work commenced.

WORLD MAP PROJECT

The entire class of thirty-five children was to participate in the project and this could be achieved only thru group work. We divided the work into four areas: 1. the actual drawing of the map; 2. the sorting of stamps into countries; 3. the coloring of the water bodies and 4. the pasting of the stamps on the map. The class undertook the work with a great deal of spirit and soon groups were vying with each other for accuracy and accumulation of geographic facts.

From the art supplies, we procured mural paper and covered most of the bulletin board which is about 120 by 68 inches. On the paper, under my direction, using *Hammond's Atlas*, they outlined the continents. They then set to the task of drawing in national boundaries. When the drawing had been completed the stamps, paste and crayons were brought out. The children devoted most of their free time to the map work and soon all of the stamps had been placed on the various countries and the water bodies colored blue. Our supply of stamps for some countries were extremely limited. We had no stamps for some of the equatorial countries of Africa and for the interior of Asia. In addition we lacked sufficient stamps to fill in completely the larger countries. These problems

were solved by carefully filling in the countries with pastel map colors. Since the boundaries of many nations were obilterated by the stamps it was necessary to color them in with heavy black crayon. The project resulted in an attractive map, not completely accurate, but a product of the class that provided an adequate teaching aid.

SUGGESTIONS

To teachers who may attempt such a mural, it is suggested that the use of pale blue poster paper will avoid the necessity of coloring in the water bodies. If mural paper is not available, the back of wallpaper is satisfactory, or sheets of art paper could be pasted together to form a large enough area.

This map not only served as an interesting class project but made the children more aware of national locations and the geographic situation of land and water bodies. The map is the focal point of our room and will continue to be so as we add to it thruout the school year.

WHY NOT USE A SANDTABLE?

THOMAS FRANK BARTON
Indiana University

Recently I was a member of a group being conducted thru a modern elementary school building (kindergarten thru the first six grades). The leader was proudly, and rightfully so, pointing out the many modern schoolroom necessities. With the visitors assembled in the center of the second grade classroom, he called our attention to the modern green chalk boards; to the large storage bins for mounted pictures which opened from the sides of the walls; to the up-to-date bulletin boards of varying heights; to the storage cubicles; to sink and attached work benches; to a separate cloak room equipped with hooks for clothing, cubicles for overshoes and benches for convenience in removing or putting on footwear and an arched opening thru which the teacher in front of the classroom could watch what went on in the cloakroom altho it was many feet away; and to electric outlets and heavy curtains for darkening the room for strip and motion films. Teacher and pupils would find the room a pleasant and efficient place in which to work. In a carefully guarded voice a member of the group remarked to me, "Wonderful! Wonderful! But where is the sandbox?"

We moved from room to room but there were no sandboxes or sandtables. Inquiring about this fact, the answer left the impression that sandboxes were outmoded and not in the blue prints of construction or operation.

WHY NOT A SANDBOX?

Have we forgotten how to use the inexpensive tools? Are we so caught up in the vortex of machine age that we have lost our perspective? Are the sound motion media "hogging" the equipment budgets? Do we believe that chalk boards and sandtables or boxes are old fashioned and therefore should not be used? In some schools both of these tools have been discarded at the request of the teachers. Are we forced to show "so many" classroom films for the annual school statistical records in order to substantiate a false concept of an up-to-date school that little time remains for other visual aids? Are our teachers so overworked that they avoid tools which may require more supervision, not less, and consequently they turn to the film and misuse it as a mechanical "baby-sitter" in order to get a little rest, in spite of the fact that they know the pupils use the same darkened period for the same purpose? Or have we failed to modernize the sandtable so its opportunities of use may be expanded and many of its limitations removed? Did the sandtable disappear along with the teaching of the physical phases of geography? Are there other reasons?

Perhaps there is no one reason for the failure to use the sandtable more extensively and effectively as a learning tool. While we may not agree on why it is not used, most of us would agree that its use is not extensive in the United States.

THE TEACHER AS A TECHNICIAN

Today, as in the past, every good teacher is required to be a good technician, but the number of teaching tools have increased so rapidly that it is more difficult to be a master of them than a century ago. The good teaching technician quickly sizes up a situation, a learning experience, a yearly program and knows which tool is best to accomplish definite objectives. He knows that all tools have advantages and limitations. He must not only use a tool wisely but he must select the right tool for the right purpose and teach his pupils to use the tool with some skill. Moreover, he should not ride a hobby by using only one or two pet tools. If he does limit the

number of tools, it is clear they cannot be used effectively for all situations and the pupil is deprived of the most effective as well as a variety of learning aids.

Modern Sandtable Construction

Many of the undesirable features of some sandtables are due to design, construction and/or need of repair.

The legs supporting a table (six, eight or ten feet long by two and one-half feet wide) should be adjustable and mounted on swivel ball-bearing wheels. Adjustable legs provide an opportunity to tilt the table lengthwise, crosswise and at various other angles by adjusting one or more legs. Moreover, the table height can be adjusted to the various pupil heights within a grade or heights of pupils in different grades if the sandtable is to be shared by two or more grades. The swivel ball-bearing wheels enable the pupils and teacher to easily move the table from place to place in the room and from room to room in the building (most classroom doors are two feet, eight inches wide or wider).

The box should be water tight and constructed so water may be drained off at various levels. There should be at least two drain outlets near one corner. One of these should be placed in the bottom and the other may well be an elongated slit placed in a vertical position so water may be drained from the top of the sand or at various heights from the bottom of the box. Such drainage outlets permit one to govern how high the water may stand.

Ideally all four but at least one long side of the box should be a heavy transparent glass so the box and its contents may be viewed from the side as well as the top. This glass should be shatter proof and have a rounded edge on top for safety purposes. Transparent plastic may be substituted for the glass. If children can get a side view, then one can easly introduce the profile and cross-section method of viewing the earth's surface and things below and above the earth's surface.

A thick plate of glass or a sheet of aluminum (the same shape but a few inches smaller in width than the box and a few feet in length) will prove useful, especially in the primary grades. It may be painted blue, inserted in the bottom of the box and represent water when the children make lakes, rivers, etc. in the sand. Buried blue oilcloth will give the same effect but will not prove as durable when jabbed with shovels and spoons.

The sandtable described above may be expensive, but before you discard this possible potential tool, compare its cost and possible uses with some of the other, more expensive equipment. A modern sandbox offers many possibilities to pupils who are being taught by the activities-laboratory-workshop method where pupil participation is essential and forced "brain-stuffing" held to a minimum.

AN OASIS PROJECT

When the type of sandbox just described is provided for a fourth or fifth grade class, the pupils could construct an oasis scene. The legs at one end of the table could be raised giving a sloping surface. The sand could also be heaped up into mounds to represent mountains, and even plastic modeling clay peaks could be added to the sand mounds or placed on the bottom of the box with sand piled around their base. Such construction is scientifically sound in that many mountains are partially buried in sediments on their slopes.

Several wells could be constructed on the lower part of the slope or sandbox by first digging holes and lining the holes with pieces of stone, One well, also a mountain, should be constructed against the glass side so as to appear cut in half. Water could then be sprinkled on the mountains and run down their sides to sink into the sand. The water would run down slope to the lower end of the box where it might rise to form a surface lake. The underground water would stand in the wells. Down slope from the well, drainage or irrigation ditches could be constructed in which water would stand. If the legs at one end of the box were adjusted at the right height, the water would run out of the sand in the upper part of the box. The children could see the height of the water level by looking thru the glass side.

The action of the water will stimulate questions and discussion. During the discussion the relationship between slope, porous nature of the earth, water movement and water bodies can be considered. Topics for further study in books, strip films and other sources come logically. Questions about water and waterbodies in the local environment pop up.

So many basic concepts are realistically presented even if in miniature. The small streams running down the sides of the mountains are soon empty. How true of so many natural streams we call intermittent. Water runs into the ground faster than over

the surface and some of the surface streams disappear soon after leaving the "modeling clay" mountains. True in many arid areas of the earth. Ground water seeps into man-made holes called wells. If holes are not lined properly with stones, the sides cave in spoiling the wells. Water runs over the surface and rises from the ground to form lakes at lower elevations. Where the earth's surface is cut or dug below the level of the water, water appears. The lake level is lowered as evaporation takes place. The ground stays damp along the edge of the lake but dries out on the upper slope near the mountains. These and other basic concepts may be based upon observation; formulated by the pupils during oral discussion; and written on the chalk board and in notebooks as résumés and applied to local conditions.

From these learning experiences may arise relationships between water, vegetation and man's activities. Realistic problems come to mind and the answer to one question raises another question—answers beget questions. Questions without sources where answers may be found beget apathy and other undesirable traits.

The sandtable should be used for experimentation as well as construction. Ask John and Jack to imagine they are leaders of caravans crossing a sand desert and they need water. Ask them to dig water holes. If one digs too close to the mountains and gets no water and the other digs near the lake and gets water, you have a problem for discussion. Other problems will follow. Where should an irrigation project be located? Where could a dam be made to hold water? Why can't you dam a river in sand and store water behind the dam? Build dams of sand and modeling clay in the modeling clay mountains and sandy slopes and add water by sprinkling. What happens and why?

After ample experimentation and demonstration, the culminating activity may be the construction of an oasis scene complete with wells, pumps, burrows, irrigation ditches, palm trees, peach and apricot trees, gardens and the oasis scene surrounded with pasture land and cultural activities of nomads.

But perfection in design should not replace the objectives of 1. showing relationships between the various elements of the physical environment and between the physical environment and man's activities, 2. stimulating questions and, 3. offering opportunities for experimentation and demonstration.

PROFILE, CROSS-SECTIONS AND AERIAL PICTURES

If at least one side of the sand table is transparent, the children have an opportunity to view the contents from the side as well as the top. These side as well as top views are important transitional steps to the reading of profiles, cross-sections and aerial photographs used in many text books, supplementary books, encyclopaedias, magazines and film. The children may be asked to sketch simple profiles or if the profile has not been introduced, the teacher may draw three profiles on the chalkboard and ask the pupils who are looking at the side of the sand table now standing below the sketches which is the best and why. The surface of the sandtable may be rearranged and the pupils asked to draw a profile. More and more complex profiles may be gradually introduced.

The children may also be asked to sketch birdseye or airplane views. The sandtable may well be the place to start in aiding pupils to read block diagrams or topographic maps. Such a table if properly used may be employed at any level.

LIMITATIONS

Some of the limitations are: 1. the objects and scenes in the box are in miniature form; 2. sand should be periodically washed and heated to insure proper sanitation; 3. altho the sandbox may be 10 or 12 feet long, it does not provide enough space in a large class for all the pupils to work at the box at the same time; 4. moulded features of wet sand quickly dry and crumble; 5. there are few modern, well-constructed sandtables; and 6. some sand will get on the floor.

The teacher should recognize and meet the limitations where possible. If we eliminate all teaching visual tools because their objects are in miniature form, then some of our best geography teaching aids must be discarded. From time to time the sand will need to be washed and baked. If the sandbox activities are properly planned and administered, all the pupils in a large class need not be working at the box at one time. The few times it seems desirable, an entire class can view the box at one time by having the shorter pupils stand in front. Modeling clay, paper mache and other materials can be used to show landforms and other objects instead of wet sand, and one should use the type of sand used in foundries rather than ordinary sand. Pupils can participate in planning and

activating sandtable activities but are distinctly limited when such media as sound motion film projectors or opaque projectors are used. Of course some sand will get on the floor just as some dirt gets on the floor, and they may be removed together. Storage space is not a problem if one adds a top to the sandtable and uses it for other purposes when not needed for its primary function.

ADVANTAGES

The advantages of a sandtable are so numerous that no attempt is made to list all of them here. The opportunities for use increase with the ingenuity of teachers. However, in order not to "beg the question" here are a few of the more salient advantages of the use of a sandtable.

1. It is an interest stimulating device. Young children have a natural instinct to display their constructive abilities in "mud pies" and "sandhouses," and at the same time they develop muscles to be used in writing and other skills.
2. Stimulates oral and creative expression.
3. Aids in making geographic concepts more realistic, concrete and easily understood.
4. Helps portray pattern, association, function and relationships of physical and cultural features whether of local or distant places.
5. Provides opportunities for experimentation and demonstration as well as culminating activities portraying geographic scenes.
6. Gives a perspective of above and below ground as well as three dimension perspective above ground or a combination of both.
7. Contributes to the development of skill in the use of other visual aids such as profile, cross section, aerial photographs, topographic maps, block diagrams, etc.
8. May be used in summarizing and testing. Children who have trouble with oral or written expression may demonstrate in the sandbox.
9. May be used as a minature garden to show relationships of soil, plants and water as well as show relationship of land surface and waterbodies.

THE MINIATURE GARDEN

The writer hopes that each child may have concrete learning experiences in a school garden, woodlot and/or outdoor camp, but the realization of this ideal may be years in the future.

If one has no outdoor garden, why not use a sandtable as a minature garden? It may be used to produce a few radishes or other vegetables or flowers. The school year is approximately nine months long and the summers three months long. If the heat in the building is not permitted to drop below freezing, or better still, if the heat in the room does not drop below 50 degrees, children can plant radishes after the Christmas holiday season and they will be big enough to eat in a few weeks. If one wishes, he may replace the sand with actual soil during a three-month period. But if the sand is sprinkled with water in which fertilizer has been dissolved, the plants will grow in sand. The children can see the roots thru the glass side which may be covered during this activity except when observation is in progress.

SUMMARY

No other single audio-visual aid or combination of aids can adequately substitute for a sandtable properly constructed and used. Let us reactivate the sandtable and without delay. Request a modern sandtable from your principal.

HOW TO UNDERSTAND A NATION

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Swarthmore, Pennsylvania

The mental atmosphere in many parts of the world is charged with discontent, with ideas of revolution, and with hopes arising from new feelings of nationalism. Near half a hundred small nations are underfed, or underdeveloped, or badly misgoverned, or suffering from two or three of these misfortunes. These peoples yearn for better things. New means of communication have caused many to get a new view, namely, that better things can be had. Some more fortunate nations are expressing the idea that they can help promote a better world society by helping the underdeveloped nations.

Each nation faces the problems produced by its own environment and history—a series of problems with geographic setting and a varying amount of geographic and social causation. The study of geography was never before so important to this nation. Our future welfare, perhaps our national safety, even possibly our lives and national existence, may depend on our knowledge of the facts of

geography and on the aspirations of our own and other countries.

What does an underdeveloped nation need?

The first need for a thousand million or so of mankind is a better food supply—a better standard of living. Authorities tell us over and over again that more than half of the human race is underfed.

We in the United States are well fed and our standard of living is the best in history. How did we get it?

MACHINES MAKE WEALTH

The answer is simple—we use machines. Machinery has so multiplied our capacities for production that we are able to pay the worker $5, $10, $15, $20 and even more per day. Meanwhile, in some other lands, hundreds of millions do most of their work without the aid of machines. They get 40¢ a day or less. Can we sell them machines, teach their use and let the people raise their standard of living and perhaps make themselves rich?

But wait a moment! Machines are not the whole story. We live in a climate in which men can be healthy and work. Some countries are so hot that energy of body and mind are depressed. Some countries have endemic diseases such as malaria, hookworm or bilharzsis, a parasitic infection which debilitates millions of Egyptians.

We have had, and still have, unrivaled amounts of good farm land, forests, mines, oil wells and other material resources. We have a government that helps people and leaves people and enterprise relatively free, and it has not been destructive with taxation. Furthermore, our courts, tho needlessly slow, give reasonable justice.

These factors and others have combined to help machines raise our standard of living and provide a surplus. If you would understand a country and its prospects, you must consider all the factors. Certainly the Point Four Missionary must know them before he sets out for the ends of the world with sprays, seeds, machines and "know how."

I cite an example. Some years ago I was taking a walk in China with an American who spoke the local dialect. We entered the compound of a Chinese farmer on the level plain, some 80 miles south of Peiping. It was November—the harvest was over. The farmer's wheat, corn, soy beans, potatoes and cotton had all been gathered.

"What will you sell?" I asked.

"Nothing," he answered. "By the time we feed ourselves, the mule and the pig, everything will be eaten except the mule and the

pig, and we will eat the pig at the New Year's feast. We burn the corn stalks, cotton stalks and straw to boil the cooking pot. We will put the cotton out to be spun on shares. We will weave our share of the yard by hand to make cloth for our clothes."

"Where do you get money?" I asked.

"We do not have much money. We do a few days' work in the town. We have very little money."

The farmer showed us his tools which he and the local blacksmith had made. Most of them were poor things made of wood. What could the Point Four team do for that peasant family? Farm machinery was not for that farm. Before the farmer can buy, he must sell, but this one had nothing to sell. He had about an acre for each person of his household. The American farmer who uses a tractor works 100, 200, 300 acres or more. He has 30 or 40 acres per person, often more. That Chinese farmer appears to be rather tightly locked into his economic position. This Chinese farm is typical of scores of millions, most of them in Asia, but also some in all the other continents.

A High Standard of Living Requires Much Trade

Nations are like men. If a nation does not sell, it cannot buy. If it cannot make or buy, it must go without. Even a small, poor nation needs and now buys thousands of kinds of articles produced somewhere by the whole vast range of manufacturing industries. Therefore every nation must and does export something. What shall it be? The resources of that nation help to decide the answer.

A strictly agricultural nation must remain extremely poor, or develop manufacturing or sell agricultural produce. If it has almost no manufacturing, it must sell agricultural produce no matter how hungry some of the people may be. Egypt illustrates this situation. Egypt has rich agricultural resources in the Nile irrigation. It exports salt, has a supply and small export of rock phosphate, a partial supply of petroleum. There are no other resources worth mentioning, not even pastures or forests. The population is now more than 3.5 persons per cultivated acre. Cairo and Alexandria together have a population of over 3 million in a total of 20 million, most of whom are tenant farmers working tiny patches of land with almost unbelievable care.

The figures of foreign trade are astounding. In 1948, the latest year reported by the Department of Commerce, exports were $581 million and imports $666 million.

The exports were simple:

Cotton (Raw)	$468 million
Rice	66 million
Onions, potatoes and sugar	14 million
Total Agricultural Produce	548 million
Rock Phosphate	3 million
Miscellaneous	17 million

In that same year, Egypt imported:

Wheat, corn and flour	$104 million
Textiles	92 million
Motor vehicles and machinery	69 million
Iron, steel	37 million
Fertilizers	33 million
Petroleum	33 million

The following classes passed the 20 million mark:

Wood
Chemicals
Electrical machinery
Coffee and tea combined

To support this vast import, Egypt's crops occupied land as follows in rough figures:

Grain	4,000,000 Feddah (1.039 acre)
Legumes	400,000
Onions and potatoes	60,000
Cotton	2,000,000
Total food, about	4,600,000

The grain area was only 2.3 times the cotton area.

In the United States that year our grain area was more than 9 times our cotton area.

The conclusion seems plain. An agricultural country must export agricultural produce or do without imports.

The United States has about 12 per cent of its people working on farms. Egypt has about 62 per cent, and national prosperity hangs on the price of cotton.

It appears as tho Egypt might be better off if a few million farmers became factory operatives and reduced the dependence on money derived from cotton. Can Egypt do this? Denmark has done something very much like it.

Examples from Southern and Western Asia

The Near East is now much in the public eye and likely to continue to be so. Investigators, including some who work for the United Nations, are generally agreed that peoples of the Near East, including Egypt, are almost hopelessly under the heel of the landlord. In these societies land, gold and jewels are almost the only in-

vestments. The land collects in the hands of the strong, who become landlords. The number of tenants increases, and they compete for land until there is a society composed of hordes of very poor tenants and a small number of startlingly rich landlords who live in the cities or even in foreign lands.

There is little desire for change on the part of those in power since any improvement may reduce their monopoly. The scene is naturally ripe for the Communist propaganda which promises to give the worker the land he cultivates.

In some of the so-called late Native States of India, the Rajahs *own all of the land.* How will the new Indian government deal with that problem?

In July, 1952, word came from Delhi that the Nehru government of India had announced a plan for the purchase of millions of acres of land to be resold in units of 6⅔ acres per family. The family will pay for the land over a period of 40 years. These families will be better off than tenants, but their farms will be so small that the farmers will be unable to purchase or use modern farm machinery and the numerous gadgets that contribute to our high standard of consumption and physical comfort (often miscalled standard of living).

How Can the People of Underdeveloped Countries Secure Capital?

Economic advance requires capital. The Twentieth Century Fund of Boston makes the statement that economic advance requires the saving of 12-15 per cent of the annual product and that it takes $12,000 of capital to employ a worker. The undernourished oriental tenant has little or nothing he can save. The landlords too often prefer limousines, airplanes and palaces to farming equipment or machines that spin and weave.

If the people of the underdeveloped country cannot or will not save, can they attract foreign capital?

Consider a town in China, or it might be in India, Pakistan, Iran, Egypt or Guatemala. In this town men work for 50 cents a day or less. The area has a market for some product you know how to make and you have capital to make it. This town appears to be a promising setting for enterprise. Would you put your money in a factory in that town? Remember that the basic fact in Asian and African psychology today is fear of western imperialism. To them

the foreigner suggests imperialism, and it is not entirely unnatural that they should think so.

There are reasons for this attitude. For several generations, Europeans and Americans had extraterritoriality in China and were independent of the Chinese among whom they lived. The rest of Asia and all of Africa was under varying kinds and degrees of European dominance, and *sphere of influence* was a potent term. So was "The concert of Europe." Fifty years ago Britain, France, Austria-Hungary and Russia were great powers, and the German Kaiser was in full strut. If their diplomats made a suggestion of "Don't do it," even to rising Japan, the Japanese government acted on the suggestion. Most of this dominance has disappeared. The Russo-Japanese War, 1904-06, World War I, World War II and the rise of the Russian menace have produced a new world. The hold of the west on Asia is loosened but the memory of that dominance still burns and our manners are not as pleasing as they might be. Walter White, secretary of the American Association for the Advancement of Colored People says: "The great need of the West in Asia is that the Asiatics shall be treated as equals, as men, on the basis of common humanity, not on the basis of color or money in the bank account." White points out that the Asiatic may be poor and his plumbing scanty, if any, but he has feelings. Tho poor, he is proud and probably comes from a culture older than Christopher Columbus.

Many observers agree that Asia and Africa are in a ferment with revolutionary ideas. They want to be free—poor if necessary, but free of foreign domination.

The crumbling of European powers encourages small nation ferment. Lebanon, Egypt, Iraq, Jordan, Pakistan and many other small nations are now *sovereign nations,* and they no longer tremble if the British lion growls. Will the small group that operates their governments use sovereignty wisely? Being sovereign states they are in theory the legal equal of any and all states. The emotion of nationalism is rising in their hearts even tho they are essentially without military power, economic surplus or credit. In the meetings of the United Nations the very intelligent representatives of the small nations can talk and vote on a level with the United States and Great Britain. Nationalism has taken forms in the Near East that will surely check economic development.

For weeks in 1951, Dr. Mossadegh, the premier of Iran, remained

within the sanctuary of the house of parliament, fearing that like Ghandi, the King of Trans-Jordan and many others, he would be assassinated because his policies were not as nationalistic as those desired by a small group of extremists among his fellow countrymen.

A few weeks earlier the previous Premier, Ali Razmara, had made an arrangement with the British for the continuation of oil operations, on terms more favorable to Iran. He was assassinated in a mosque. The man who assassinated him is regarded as a national hero by many. Fadayan, the extremist Moslem organization, publicly announced its intention to assassinate Premier Mossadegh because the head of Fadayan and Razmara's assassin were held in prison. According to the *New York Times,* "The custom of assassination is deeply rooted in Iran, being regarded in many quarters as evidence of idealism. Public men are never entirely safe from it."

In the new atmosphere of greater independence of small nations, Iran and Egypt have given capitalists two instructive lessons in foreign investment.

Iran "nationalized" a billion dollar British oil enterprise—that is to say, the government took the largest oil refinery in the world without paying or having a plan for paying for it.

I now present a few raw facts in this oil episode because they are very suggestive of extreme nationalist psychology. The refinery was taken over between March and June 1951. The Iranians could not run the plant. They would not let the English run it, they would not let the International Bank run it because the bank would not promise to keep all Englishmen out of the plant. The loss of oil royalties cut off a large part of Iranian revenue. Financial troubles thickened. In July, 1952, Mossadegh, Premier of Iran, asked the Shah for control of the Army—dictatorial powers. The Shah refused. Mossadegh resigned. The Shah asked Ghavam, the leader of the opposition, to form a government. Ghavam announced his intention of making a settlement with the British.

Mobs gathered quickly. The police ordered them to disperse, fired on them and were soon overwhelmed. The Shah refused to let the Army be used to keep order. The rioters had a field day in Tehran and other cities. They threw stones, burned buildings, wrecked the offices of newspapers, burned Ghavam's house and shouted that he should be hanged as a traitor because he proposed to start the oil plant and get some revenue. Ghavam fled for his life.

Mossadegh returned to office with dictatorial powers. The rioting mobs shouted that all deputies who had voted for Ghavam should be killed. The one deputy who voted against the return of Mossadegh fled from the chamber before the hoots, shouts and threats from crowded galleries. Another deputy called for the expulsion of the American Point Four experts declaring that they had done nothing for Iran. Albin Ross, writing from Iran, stated in the *New York Times,* July 29, 1952, that the Iranians felt that the Americans should feel grateful because the Iranians accepted the $23,000,000 of Point Four aid.

Meanwhile, Point Four staff members in the country found the villagers courteous and friendly.

When you speak of the people of an underdeveloped country, you should distinguish in your own mind between the vast, illiterate, poor, exploited majority and the small group of possessors who own the country and govern it. Again I quote Ross on Iran, in the *New York Times*: "The privileged class absorbs the income of Iran while making next to no contribution to the national treasury," and then he referred to the unpaid back taxes of the land owning class.

The oil refinery stands idle, the government cannot pay salaries and mobs of 20,000—30,000 parade Tehran and tell the government what to do. Mr. Ross, who has covered the Near East for the *New York Times* for five years, says that the street demonstrations of thousands of students in Cairo are more potent than the formal elections.

It now looks as if the Iranian oil nationalization has encouraged the Egyptian malcontents, for shortly thereafter Egypt violated its treaty with Britain and talked about taking the Suez Canal in violation of the treaty. After much inflammatory talk and some rioting, mobs in Cairo had a burning day. The government did not distrub the mob while it burned buildings and millions of dollars worth of other property of the British, French and other foreigners. A month later strikers in an Egyptian textile mill burned a million dollars worth of cotton. In 1953 army groups in both Egypt and Iran seized power.

The Radio as a Disturber of the Peace

The radio is a new and potent nation rouser for good or ill. The agitator no longer needs to face his audience or send them reading matter. By radio any demigogue can now address a city or half of

an illiterate nation with statements that may bear small relation to truth. One of the most potent arguments to win a point in some near east localities is to tell the landlord-ridden populace that the western imperialists have made them poor. Mossadegh, Premier of Iran and a wealthy landlord, announced that misstatement of fact in Iran and told it again in Washington in 1952. That is the great refrain of the Near East. "It is all the foreigners' fault." Such statements tend to divert the attention of the tenant from his economic and political troubles.

It does not appear likely that American and European capitalists will soon start important industries in many underdeveloped countries in the eastern hemisphere. Before making such a venture they will consider not only the resources and the possible market, but also the national psychology and the policies which may be produced by nationalism combined with ignorance, poverty, radio and native and foreign agitators playing upon local prejudices. The age of machinery has created new agencies of ferment, new incitements to revolution among peoples who need revolution, but do not of necessity know how to get it or use it.

The desire for independence by the people of the underdeveloped countries is perfectly natural, but do not forget that "independence" in such a country means rule by a small clique with little responsibility to any one. Even a high-minded dictator must deal with a situation in which cultural status, lack of education and lack of common business honesty make conditions in which widespread economic improvement is difficult. Cultural changes are usually slow. The illiterate and land lorded Near East is in a tight box.

STATEISM IN THE NEAR EAST

Since local capital is scarce, and because foreign enterprise is loath to come, the next step is for the governments of undeveloped countries to try to develop industries directly or by subsidy.

Iran has a surprising number of government-owned factories. The cost sheets of a government-operated factory in the best regulated countries in the world tend to drift toward needless costs. And what must costs be in the Near East where graft and nepotism are regarded almost as a propriety, being built in by centuries of experience. The record of Government enterprise in Iran is a checkered story of ups and downs. There are some government monopolies which of course save the government factory.

After World War II, the rejuvenated Turkey needed manufactures, feared the foreign enterpriser and started a variety of government factories. Financial difficulties arose. An election threw out the administration, but what could the victors do with the factories?

They called a foreign doctor, the International Bank for Reconstruction and Development at Washington. Thirteen American experts gave 276 pages of diagnosis and prescription (see Johns Hopkins University Press).

One of the points this report makes clear is the psychological unpreparedness of the Turks. Shepherds whose flocks double in a year and merchants who do small business for large percent of profits have great difficulty in thinking of amortization for industries of slow return with which West Europeans and Yankees have struggled for generations. When the Turkish government wished to withdraw it found the problem difficult—J. P. Morgan, I, once made an oft quoted remark—"Can you unscramble an egg?"

Almost any underdeveloped and populous country would start on an industrial boom if the financiers of New York, London, Paris and Amsterdam could be sure that their capital would be as safe in foreign countries as in the home countries. Our Point Four missionaries may do much to help the all too few honest young progressives start local industry and make *beginnings* at cultural and economic development in such countries as Turkey and Iran.

Economic Development in Latin America

Latin America is another area from which many reports arise concerning the resources and opportunities awaiting the touch of American know-how and American capital. Nearly every Latin American country has an army—sometimes a surprisingly large one in relation to the resources and population of the country.

When the United Nations secretariat called upon the member nations for military aid in Korea, Colombia sent one infantry battalion, Cuba one infantry company, Bolivia offered 30 officers and Panama sent a frigate and some ships for transport. Several countries sent supplies, total value up to January 15, 1952, less than $2 million.

The large Latin American armies are primarily for the purpose of protecting the current governmental regime against rebellion which if successful would place the general of a rival army in the presidential palace. The number of Latin American "elections" by

military shift in legion, whereas real elections are rather rare. Venezuela for example has had 22 constitutions and one election in 125 years. The one elected regime was soon thrown out by military force. Of these last winners three leading members were shortly shot from ambush.

If you owned stock in an oil company that produced crude oil in Venezuela, would you recommend the company to put 50 or 100 million dollars into a refinery in Venezuela built for the export trade? Or would you put the refinery a few miles out in the sea on the Island of Aruba with its more stable Dutch government? Aruba has one of the largest oil refineries in the world. Venezuela does not.

The military group that rules in many Latin American countries does not feel responsible to the people or to public opinion. It got its power by palace coup or perhaps a little fighting, and it expects to go out of power by the same means. This is a close approach to personal government of the oriental monarch type. In *theory* and *names,* with "president" and "congress" and "election" they resemble the government of the United States, but the operation is as different as any other theatricals.

If one of these governments gets a loan or a free gift from the United States, will it benefit the national economy or some special group? In one recent case a nation whose railroads are reported to be in an extremely delapidated condition received American millions. The money was used to build a magnificent super-highway by which the wealthier citizens could drive quickly in automobiles from country homes to national capital. No regime spending money for the national welfare would have built that luxury highway.

Any dictator or small ruling clique can put up a sham democracy, or sham of any other kind of government. These rulers may give their governments pretty names and get away with dictatorship (police state) for generations. They can do this because they have the bullets and are not responsible to an informed electorate that can hold an honest election and then change their government.

The people have to endure it, but capital is more mobile. It stays away, runs away or hides, or shows itself by only operating as few industries as possible instead of as many as possible. A great gulf stands between this *few* and this *many.* Few persons realize how great a part of National Wealth above malnutrition level depends on good government—generation after generation. For the lack of it most of the sixty odd members of the United Nations must con-

tinue, for a time at least, to have industry at a low level and a standard of living that is much lower than it might otherwise be.

It is a question of civilization, and becoming civilized is usually a slow process. I was speaking of this shortage of capital to an educated Hindu, "They have capital," said he (meaning money) and then, making a gesture as of digging, "They bury it." In many countries government is holding back the enterprises of their own citizens as well as of foreign investors. "Government of the people, for the people and by the people," is strange talk for the great majority of the human race.

CAPITAL FOR THE UNDERDEVELOPED

What is the prospect for the decades immediately ahead? In the *Christian Science Monitor,* May 13, 1952, William Frye, writing about the United Nations Preliminary Report on the world social situation said,

1. Roughly two-thirds of the world's population is fighting a losing battle against poverty, hunger and ignorance while the other third is making dramatic strides toward better living . . . one of the most significant developments of the 20th century."

This report calls attention to "Six per cent less food available now than there was before World War II, and many more people to feed." The United Nations experts say the peasants of Asia, Africa, the middle East and South America are "the forgotten men of the 20th century." These experts say that greater international cooperation is needed to solve problems "that appear insoluble when viewed within the frame of national resources." Please recall the above stated facts about Iran and Egypt.

Now what is the prospect immediately ahead for raising standards for these forgotten men? During the continuance of present standards of morality, investment of foreign capital in many underdeveloped countries apparently must continue (as it is now—to be in the main) limited to the lowest possible figure, the extraction of crude raw materials, especially ores and for agricultural products which do not require far-reaching organization.

Foreign merchants in the ports will continue to handle agricultural exports that do not demand expensive or elaborate local processing, such as sisal, abaca, palm oil, palm nuts, copra, peanuts, coffee, cacao, wool, hides, jute. These products can be produced by units operated by native populations and without the aid of large capital investment from any source.

There is possibility of increased government enterprise if governments can borrow or have money given to them.

Point Four is a good idea. It is a wonderful gesture. The political effect seems good. Estimates of its probable economic results do not grow with investigation. Generations of time are required to change a culture, but the know-how group can show the ambitious young men how to perform an economic function. The vital question is what will the landlords do? What will the next Near East government do? What will the next Latin American general do when he gets into the Presidential palace? What will the courts do if you must have a law suit? Anyone interested in this group of questions may profitably study the record of the Peron administration in Argentina in the 1940's and 1950's.

I began by pointing out economic bases of national prosperity. I hope we all agree that the problem is also intellectual, moral and spiritual. That is to say there must be education, respect for work, business honesty and people with a social consciousness who live under a government that is reasonably honest. That is a large order, but it is far from impossible.

THE CASE OF NORTHWESTERN EUROPE

I have spoken at length about some problems that face the people of the Near East and Latin America. Let us cheer up by considering progress in northwestern Europe—especially Denmark, Norway, Sweden and Finland.

The material resources of Denmark are not promising. That small country is by nature little more than a sand spit projecting into the cool ocean. Denmark has a little lignite, no coal, no oil, no iron, no copper, no forest. It has a wholesome and invigorating climate and *Danes*. Denmark was in a rather sorry condition a hundred years ago. Fortunately there were educational leaders who had visions of better days to come. These leaders succeeded in waking up their fellow citizens. By work, thrift, education, honesty, social and business organization and good government the Danes have become a prosperous nation with a balanced industry, a good standard of living and a high civilization.

The stories of Sweden and Finland are equally inspiring. Cold and rocky, peat bogs and forest, with bits of farm land at the south —these two small duplicates of eastern Canada are an example to all the world. They have started a revolution. It began with work, education and respect for the individual—sometimes called social

consciousness. In recent decades these two peoples and the Danes may truly be sad to have almost made their countries over. They are visited now by a steady stream of investigators from many lands. The visitors go to learn how life and living grow better.

Every Point Four staff member should begin his work with a study-journey. So also should the young Near East nationalist who would start a revolution or the Latin American who has aspirations for his country and his fellow countrymen. Let them make a study-journey to Scandinavia. Before going they should read three books by Hudson Strode on Sweden, Denmark and Finland, published by Harcourt Brace. You can find many other good books, but these studies by Strode are loudly acclaimed by a chorus of critics.

CONCLUSION

There is urgent need for a broadened concept of geography and for more and better teaching of it. It is needed in school, in college and above all, in legislation. Geographic situations lie back of foreign policy, and foreign policy has suddenly risen to undreamed importance. The members of the Congress of the United States carry our lives in their hands. Think of the danger we are in by having a government in which a majority of the law makers are geographic illiterates. No person should be allowed to enter the primaries for election to the American Congress who had not already passed the geographic examinations necessary for admission to the United States Consular Service. Certainly the law maker needs to know as much as the cub consul.

JAMES FAIRGRIEVE
1870-1953

NEVILLE V. SCARFE
University of Manitoba

On October 8, 1953, James Fairgrieve passed away at his home in North London, England after a severe illness. For fifty years he has been the outstanding world authority on the teaching of geography. It was his visit to Chicago University in 1921 that set in motion the great developments in the teaching of geography which Harlan Barrows and Edith Parker so ably followed.

James Fairgrieve was an Ayrshire man, the son of a poor Scottish minister. His parents must have been magnificent people

for it would be difficult to find a family so devoted to one another and yet so cleverly individualistic as the Fairgrieves. James always had amazing energy and a tremendously active and astute mind. Despite poverty he determined to go to a university. Armed with nothing but his own indomitable spirit and a sack of oatmeal he "starved" his way thru the University of Wales at Aberystwyth. Naturally his superb powers won him distinction, and he was enabled to go on to Oxford where he studied mathematics.

Leaving Oxford he went back to teach in Ayrshire at Campbelltown. His spirit, however, was too far advanced for the teaching methods of a Victorian grammar school. He read assiduously, he had a wealth of ideas, he was anxious to pioneer. With no money he travelled to London and their with the help of a very clever and wonderfully human wife he set up his own school. Here he experimented with his ideas on education. Gradually, too, he formulated what was to be his life's work—the teaching of geography.

In Scotland and in Wales he was an intrepid walker and explorer. At Aberystwyth and in Oxford he was always interested in the physics and mathematics of the atmosphere. These two absorbing interests led him to study geography, first with Mackinder and then with Lyde. Both men were superb teachers and had been fired with the spirit and value of geography. Fairgrieve, too, was fired with the worth of geography.

Having equipped himself by enthusiastic study as a geographer and having completed some researches in teaching methods, he was invited by a very farseeing headmaster, W. G. Constable of William Ellis Endowed School, to come and apply his new ideas in a great London School.

His success was immediate and quite outstanding. Before long he was the leading light in the Geographical Association of Great Britain. So much so that the subsequent course of the Association was guided more by Fairgrieve than by any other man. He set about the task of stimulating the teaching of geography thruout the length and breadth of Britain.

In 1912 he was invited by another extremely astute man, Professor Sir Percy Nunn, to become lecturer in methods of teaching geography at the London Day Training College, later to be called the University of London Institute of Education. Here he remained until his retirement in 1935, but during those 23 years he became the most respected geographer in Britain and the greatest figure

in the world for the teaching of geography. His series of textbooks called "Human Geographies" written in collaboration with Ernest Young are the earliest successful attempts to bring to children the real flavor of modern geography by up-to-date pedagogical method.

It was characteristic of him that he had a clear idea of the proper purpose, function and philosophy of geography in school than any of his contemporaries. It was characteristic of him, too, that he had saner views on teaching methods than have been exhibited anywhere in the world so far. Fairgrieve was years ahead of his time. His "Geography in School" will remain for many years the classical treatise on geography teaching, and, for that matter, on educational method.

Thru Fairgrieve geography in Britain is held in higher esteem and is a more popular subject than in any other country.

To his friends he was much more than a fine geographer, clever teacher, expert meteorologist and enthusiastic gardener. He was so essentially human, kindly and generous. His understanding of human relationships was superb. His was a truly international mind and spirit.

ANNUAL MEETING

NATIONAL COUNCIL GEOGRAPHY TEACHERS

San Francisco

Palace Hotel

AUGUST 19-20, 1954

JOURNAL OF GEOGRAPHY PRIZES

This is the seventh year that JOURNAL OF GEOGRAPHY Prizes have been awarded. During the first four years, two prizes were offered each year and in 1951 after the establishment of the Geographic Education Prizes the number was increased to three.

Those of you who are interested in details about these prizes please refer to an account of their establishment, criteria for their selection and record of the yearly awards which appears on pages 207-210 of the May, 1952, issue of the JOURNAL.

ISAIAH BOWMAN PRIZE

The Isaiah Bowman Prize is awarded "for a paper dealing with political geography, South America, or Pioneer Regions and published during the last five years in the JOURNAL OF GEOGRAPHY." The 1953 Isaiah Bowman Prize is awarded to Professor George W. Hoffman, University of Texas, author of an article entitled "The Shatter-Belt in Relation to the East-West Conflict," published in the October, 1952, issue.

The 1949 Isaiah Bowman Prize was awarded to Professor J. W. Coulter, University of Cincinnati.

CORA P. SLETTEN PRIZE

The Cora P. Sletten Prize "is for a paper by a woman or for three or more reviews by the same author during the past five years in the JOURNAL OF GEOGRAPHY." The 1953 Cora P. Sletten Prize is awarded to Mrs. Halene Hatcher Visher, Bloomington, Indiana, author of the following three articles: "Conservation Education or Tragedy," January, 1949; "Conservation—An Immediate Concern to all Nations," September, 1950; and "Conservation Education Through the Social Studies," March, 1952.

The 1949 Cora P. Sletten Prize was awarded to Villa B. Smith, John Jay High School, Cleveland, Ohio.

ELEMENTARY GEOGRAPHIC EDUCATION PRIZE

The Elementary Geographic Education prize "is for the best article in the last two years on Techniques in Teaching Geography in the Elementary School Level—first to sixth grade inclusive." The 1953 Elementary Geographic Education prize is awarded to Mr. Robert Wayne Trail, teacher in the Oak Street School, Taylorville, Illinois, author of "Maps in the Primary Grades" which appeared in the September, 1952, issue of the JOURNAL OF GEOGRAPHY.

THE NATIONAL COUNCIL AT WORK

Contributing Members of the National Council of Geography Teachers are those who pay a ten dollar annual membership rather than the regular four dollars. Four of the additional six dollars of Contributing Members goes into a Publication Fund which is used to publish materials other than the manuscripts appearing in the JOURNAL OF GEOGRAPHY.

CONTRIBUTING MEMBERS FOR SEPTEMBER 1952 TO OCTOBER 1953 (INCLUSIVE)

1. Mamie Anderzohn
2. Wallace W. Atwood
3. Thomas F. Barton
4. Nels A. Bengston
5. William J. Berry
6. Viola Bohn
7. A. E. Burdick
8. Norman Carls
9. Rose B. Clark
10. George B. Cressy
11. Florence Cullin
12. Floyd F. Cunningham
13. Margaret B. Downs
14. Rosaline Dragon
15. Robert R. Drummond
16. Elizabeth Eiselin
17. Annice Davis Elkins
18. Olive Fish
19. Adah Flemington
20. Alice Foster
21. John H. Garland
22. Gilbert Grosvenor
23. Frances M. Hanson
24. Ruby Harris
25. Lucia C. Harrison
26. Preston E. Jones
27. L. G. Kennamer
28. G. David Koch
29. Clyde F. Kohn
30. Homer Knight
31. Katherine J. Long
32. Harriet Ruth Long
33. Minnie M. Lemaire
34. Ben F. Lemert
35. Alice W. Magee
36. W. R. McConnell
37. Joseph T. Maddox
38. Carl H. Mapes
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44. Catherine M. Roberts
45. Ina Cullom Robertson
46. Irene Roubal
47. Earl Shaw
48. Ada M. Shawkey
49. Guy-Harold Smith
50. Cyril L. Stout
51. Melvina M. Svec
52. Amy Tenney
53. Zoe A. Thralls
54. Mildred Tillman
55. A. G. Tillman
56. Stephen S. Visher
57. Anna M. Wellnitz
58. David C. Winslow
59. Katheryne T. Whittemore
60. Elizabeth Zachari
61. Rose Zeller
62. Norah E. Zink

Do you plan to attend the Annual Meeting of the National Council of Geography Teachers which will be held in San Francisco in August, 1954?

The Travel Division of the National Education Association in cooperation with the New Jersey State College at Trenton is sponsoring a credit earning trip to California. Write for detailed itinerary to Travel Division, National Education Association, 1201 16th Street, N.W., Washington 6, D.C.

INA C. ROBERTSON, *Secretary*

ANNUAL MEETING, NATIONAL COUNCIL GEOGRAPHY TEACHERS, SAN FRANCISCO, PALACE HOTEL, AUGUST 19-20, 1954

Among the noteworthy events on the program at this meeting will be a television broadcast about geography over station TV KPIX, Channel 5, San Francisco, which has agreed to donate 30 minutes for the purpose. The TV committee to prepare the script consists of:

A. J. McNay, Standard Oil Company of California, Chairman
William C. Dempsey, Station TV KPIX, San Francisco
Dr. Alfred R. Sumner, San Francisco State College
Dr. Lyle Gibson, San Francisco State College
Dr. Joseph Williams, Stanford University

Two field trips will be offered at the San Francisco meetings on Saturday, August 21. One by airplane will cruise for 150 miles above the Bay Region. The setting of San Francisco, Oakland and other Bay communities will be seen as will the famous San Andreas Fault, the movement along which caused the earthquake nearly 40 years ago. The ground trip will emphasize the industries of San Francisco and the international character of its people.

The meetings in San Francisco will be held in the famous Palace Hotel, Thursday, August 19 and Friday, August 20, 1954. This is the first time the NCGT has met on the Pacific Coast and a large attendance is anticipated. Make your reservations at the Palace Hotel early. The meetings were scheduled for late August between summer sessions and the beginning of fall terms to accommodate those who may plan to drive to the meetings. Conducted tours to the NCGT meetings in San Francisco are planned by both bus and railroad. Announcements regarding these tours will be made soon.

OTIS W. FREEMAN, *President*

GEOGRAPHICAL PUBLICATIONS

Eva Knox Evans. **Why We Live Where We Live.** Little Brown & Company, Boston, 1953. 151 Pages, 14 black and white illustrations by Ursula Koering, $3.00.

Here is an excellent book to add to a room or school library. It will give the children a good idea of why they live where they do. The formation of the earth's crust, with the resultant physical features is explained in terms within the grasp of pupils in the intermediate grades. How men made use of these physical features in exploring and in selecting places to settle in our country is well presented.

The colonization of the eastern seaboard, the western expansion, and the exploration and settling of the far west are tied to the influences of geographic environment.

Why We Live Where We Live should be especially helpful in school systems that use an economic geography text at the intermediate and junior high level. It should be equally valuable for children changing over at the seventh grade to a text organized by climatic regions. In fact, seventh grade teachers might like to use this book to supplement the social studies

The chapter headings are informative and the vocabulary is simple enough for young children; yet the content rates high for interest. There is a double-page black and white illustration for each chapter. These are etching-like, charming and informative. An excellent map of the United States appears on the end-papers. The movements of the early explorers and settlers can easily be followed on this map.

Miss Evans has given us a valuable supplementary book for use in the social studies program or in reading classes.

MARY L. WARD

Douning Street School
Worcester

Alexander Reid. **The Young Traveler in France.** New York: E. P. Dutton Company, 1953. 224 pages with photographs and map, index and glossary. **$3.00.**

This volume is one of a series called the Young Traveler Series each written by a person who knows the particular country first hand. This one tells the story of an American family visiting those parts of France which a normal tourist family would see on an extended visit. There is a real human story which gives the book unity. It is told in such a way as to attract interest and also to paint an accurate picture of scenery and life. It does not attempt to be comprehensive or all inclusive but it gives a faithful insight into France and French life and is an admirable background library book both for French lessons and Geography lessons.

The story describes arrival in Paris in winter, the journey to the Riviera and the stay in the south. The return journey takes in the Alps and Alsace as well as a trip to Brittany. It is no mere travelogue. The story gives the feeling of staying and living in the place for some time. The reality is heightened, too, by inclusion of many fine photographs and sketches. The book is suitable for the Junior High School level.

The book does not purport to teach geography or even to select a typical sample of ordinary life in France. It keeps to the spectacular and to the tourist areas and so is consistent to its purpose of painting an American tourist's view of France. On the other hand the book digs deep into life in the places visited and one comes away with a real feeling of actually having lived in France. This is done by telling an ordinary story without recourse to fictional excitement or romantic excess. The book relies for its attraction solely on the reality which is France.

N. V. SCARFE

University of Manitoba

Norman J. G. Pounds. **Europe and the Mediterranean,** McGraw-Hill Book Co., Inc., New York, 1953. vii and 437 pages. **$6.00.**

Pounds' book is one of several college geography texts on the continent of Europe to appear in recent years. It is the first one to distinguish between the "Mediterranean" and "Europe" in the title and to include all shores of the Mediterranean in the text. This approach is to be applauded, because it recognizes the unity of the Mediterranean on the one hand and the interdependence of "Europe" and the "Mediterranean" on the other.

Of the 32 chapters, the first four are devoted to a systematic analysis of the physical and cultural features of Europe and the Mediterranean. These chapters demonstrate again how difficult it is to generalize about a continent with such physical and cultural complexity as Europe. Expressions like "in large measure," "usually," "seldom," and "sometimes," are used liberally and there is a good deal of oversimplification. A few factual errors appear as, for example, the assertion that the Basque language is localized in the Bilbao area (p. 35), and that all major railroads in Europe except the Russian are of the same standard gauge (p. 51).

Not counting the conclusion, the remaining chapters of the book are grouped into northern, western and central Europe, Danubian and Balkan lands, the Mediterranean region and the USSR. For each of the major divisions, there is an introductory statement giving historical setting, as well as a brief summary of the most important geographical features. Under some political units such as France, the author describes the situation of the country, its structure and terrain, climate, vegetation and soils, and follows these by detailed discussions of individual regional components. This outline is not consistently adhered to, and in some chapters one finds only brief statements concerning situation and terrain before the regional breakdown. For many of the political units the author

also gives observations with regard to economic development; in fact, for France, Germany and Great Britain, he provides separate chapters for this. Lebanon, Jordan and Cyprus are mentioned in the chapter entitled, "Syria and Israel," and Lebanon does not appear on a map showing political boundaries in the Middle East (Fig. 225, p. 374).

The text is accompanied by a wealth of illustrative material, many maps, diagrams and photographs. The maps are simple, clear, and to the point. It is unfortunate, however, that most of them have no geographic coordinates nor North arrows. A number of the maps have no legends, or the legends appear in the form of sentences in the descriptions underneath, making their interpretation rather difficult (e.g., Fig. 18, p. 32).

The first four chapters and each political unit are followed by a list of biographical references which will be valuable to students as well as teachers.

GUIDO G. WEIGEND

Rutgers University

Geography of Europe, Ed. by George W. Hoffman. The Ronald Press Company, New York, 1953, 747 pages. $7.50.

Mr. Hoffman and his team of ten contributors have been surprisingly successful in solving the extremely difficult task of producing a Geography of Europe which in spite of the complexity of its problems and regions is uniform and not merely a collection of loosely connected essays. Having solved this problem, a symposium of this kind is of course vastly superior to a one-man effort as it can utilize the rich background of the individual contributors.

A general background in historical and physical geography is provided in two chapters by W. Gordon East and Nels A. Bengston. Seven regional chapters follow: The British Isles, by F. Kenneth Hare; Northern Europe, by Vincent H. Malmström; Western Europe, by Alain Plénel; Central Europe, by George W. Hoffman; Southern Europe, by Eric Fischer; East Central Europe, by Geza Teleki; Eastern Europe, by Theodore Shabad.

These chapters follow more or less the same pattern of dealing with the physiographic features of the region and, in a discussion of the political units concerned, treating the broad concepts of its historical and economic geography. To this reviewer it seems that, with one exception, the contributors have succeeded in presenting a well-rounded picture of their regions; the exception, I feel, should be made in regard to the chapter on East Central Europe, in which a number of inaccuracies and over-generalizations were noted. A final chapter on Europe in the World's Economy, by Henry H. Schloss, discusses the economic history, the resource pattern and factors of international trade and integration in Europe, without, however, linking the topic sufficiently to the field of economic geography.

As a whole, the book can be warmly recommended as a welcome addition to former texts on the subject to be used at the college level. The rich map material and the statistical tables are carefully selected. To the student and teacher especially interested in power relations conditioned by geographic factors the book leaves significant gaps. The editor apparently felt that it was more important to stress elements of historical and economic geography than to deal in detail with the often controversial and fluctuating problems of political geography. The task of including an objective analysis of the factors of political geography in such a symposium is of course difficult but can be solved, as is evidenced by the excellent book on *The Changing Map of Asia* by W. Gordon East and O. H. K. Spate (London, 1949).

HANS W. WEIGERT

Georgetown University
Washington, D.C.

Regional Atlas, edited by Edward B. Espenshade, Jr., Chicago: Rand McNally & Co., 1953, $2.50.

This paper bound, abridged edition of *Goode's World Atlas* represents the publisher's attempt to meet the popular demand for a low cost, classroom atlas. Included in this atlas are five world maps: political, physical, climatic regions, population and predominant economies; three United States and Canada maps; physiographic, population and types of farming, minerals and manufacturing; as well as nineteen other regional maps, most of which are from the same plates utilized in *Goode's World Atlas.* Also there is an eleven page index, a listing of the principal cities and countries of the world and a list of abbreviations of geographical names and terms.

As might be expected, an inexpensive atlas will include fewer maps than a more costly one. It is difficult to understand, however, why a 1:1,000,000 map of Manila Bay should be included and one of New Zealand omitted, except on a 1:50,000,000 map of the Pacific Ocean; why the continent of Africa does not deserve the 1:16,000,000 rather than the 1:40,000,000 map which is included, and why the map on pages 18 and 19 should be entitled "Canada and Newfoundland." It would seem, also, that a better selection of United States sectional maps, and a 1:10,000,000 map of central Europe would be desirable.

In spite of these limitations, the *Regional Atlas* will prove generally satisfactory for introductory courses in World Geography, if one does not desire the economic maps familiar to all who use *Goode's World Atlas* or *Goode's School Atlas.*

GEORGE A. RHEUMER

University of Southern California

G. W. Tyrrell. **The Earth and Its Mysteries.** London: G. Bell and Sons, Ltd., 1953. xii and 278 pages. $3.25.

This book, called an introduction to earth science, is an unusually readable and informative introduction to geology. Although "the book is intended to be popular in style and presentation, no attempt has been made to write down to the . . . non-technical reader." The resulting volume is delightful reading for the trained geologist, who recognizes the skill with which Dr. Tyrrell summarizes accepted concepts and principles in the ramifications of the science, as well as his bold yet judicious use of accepted technical terms. The book will also appeal strongly to the non-professional earth scientist, who will gain a working knowledge of earth materials, structures, processes and history.

In plan, *The Earth and Its Mysteries* consists of 32 chapters on such subjects as the earth's crust; volcanoes; rocks; the work of such agencies as rivers, wind and the sea; crustal movements and earthquakes; divisions of earth history including the Ice Age; and the age of the earth. Each chapter is really a brief, pointed essay that avoids the tedium of oversystematization and can be read with pleasure by and for itself. Examples and descriptions are selected from all over the world, and from within a broad sweep of man's history—in consequence, even the trained reader finds his viewpoints freshened and his horizons enlarged. Dr. Tyrrell is a masterly writer, fully abreast of recent developments in his subject.

Your reviewer has long felt the need for a book to which the intelligent layman could be referred to gain an understanding of the materials, methods and major concepts of geological science, as well as an appreciation of its fascination and intellectual appeal. Tyrrell's volume seems to fill this need. The book should find a wide market in this country and win a host of satisfied and enthusiastic readers.

WILLIAM E. POWERS

Northwestern University

Eric Shipton. **The Mount Everest Reconnaissance Expedition.** E. P. Dutton and Company, Inc., New York, 1952. 128 pages, 104 illustrations, $6.00.

This book, by one of the world's greatest mountaineers, is an exciting record of the reconnaissance party led by him in 1951 on behalf of the joint Himalayan Committee of the Royal Geographic Society and the Alpine Club. The purpose was to gather certain information for a future attempt to reach the summit. The extensive ice-fall was to be explored and a new approach from the southwest was to be sought. Here-to-fore the Government of Nepal had forbidden Western travelers permission to enter the country and little was known about this side. This record is an excellent background to the attempt in 1953, the success of which was dramatically announced during the Coronation of Queen Elizabeth II.

There are three divisions to the book, The Goal, The Reconnaissance and The Pictures. Essentially it is a book of pictures, for as the author says in his introduction, the story of the expedition "is intended only to serve as a background to the photographs," many of which are excellent photography and all of which are interesting as well as informative.

Every grade, junior high and senior high library should contain this volume, for it can well serve as a key approach, as an adventurous and romantic approach, for the Geography Class and others, both Human and Physical, to the southeastern part of Asia in and around which about one half of humanity lives. It cannot fail to capture the imagination and interest of everyone and help to focus the attention on that very important and awakening part of the world.

JAMES G. SIMS

Bloomington, Indiana

Muriel Sibell Wolle. **The Bonanza Trail.** Indiana University Press, Bloomington, 1953, xvi and 510 pages with illustrations, glossary, bibliography and index. $8.50.

Anyone who has studied the West is struck by the role of mining for precious metals as the entering wedge opening up most of the country following a thin veneer of fur trapping in some portions. In a few cases these beginnings have resulted in permanent settlement nearby (as in parts of California). More often, however, the veins gave out and the miners moved on, inasmuch as alternative opportunities in deserts or mountains for farming were non-existent. Settlement of the West as a whole, however, was speeded up, even tho the immediate district of a desert mine was not permanently settled.

Mrs. Wolle has visited literally hundreds of these ghost and semi-ghost towns in the western states and writes informatively of them. The book is thus a most welcome check list and guide to out-of-the-way spots of interest to many specialists and travelers. Little original research, beyond conventional historical and romantic background, however, is apparent; the book's purpose is to serve as a sort of light, artistic and entertaining guide book. Geographers therefore will be disappointed at the lack of sophistication in treating location and other factors. The introduction, however, briefly and interestingly pulls together many threads to classify and interpret ghost towns and their functions in a significant manner.

The best features of the book in my opinion are the numerous black and white sketches of ghost towns and their buildings. These sketches are all first-hand originals, excellently executed by Mrs. Wolle, a gifted professional artist. They are not only beautiful in themselves but also capture the spirit of the places.

EDWARD L. ULLMAN

University of Washington

Elementary Teachers Guide to Free Curriculum Materials, Tenth Annual Edition (compiled and edited by Patricia A. Horkheimer, Paul T. Cody and John Guy Fowlkes) Educators Progress Service, Randolph, Wisconsin, 1953. 334 pp., $4.50.

Elementary Teachers Guide to Free Curriculum Materials should be very helpful to teachers of geography and others who wish to enrich their work with pamphlets and bulletins of specific information, maps of many areas and purposes, charts and posters on numerous subjects and even exhibits and displays, all free for the writing. More than twelve hundred titles are listed under various subject divisions, including 132 entries under Geography. However, many titles found under Conservation, Wildlife, Soils, Forestry, History, etc. are quite appropriate to use in geography classes.

The sources of material include federal, state and foreign government productions as well as commercial and industrial.

The organization of the volume is excellent. The table of contents is clear as to the subject divisions and subdivisions, directions for the efficient use of the book and other suggestions. A color contrast in the pages making up the different sections is commendable. One soon remembers blue is the subject index, pink is the title index and yellow is the source index.

In addition to the helps included in the guide there is a separate booklet of sample units based on helps from *Elementary Teachers Guide to Free Curriculum Materials.* These units are carefully planned and developed, making an excellent model for practically any need or situation. In previous editions the units were bound with the guide. The separation has little merit, if any.

For each listing the compilers give pertinent information as to the contents to be expected and proper reference as to the source. In some cases the teacher must make the request for materials on school letterheads, in other instances students may apply. Many listings are available in classroom quantities while others are single items for the teacher or librarian only.

The teacher who fails to recognize and use the many valuable free or inexpensive aids, from whatever source, prepared by industry and others, fails to helpfully expand his classroom presentation at little expense. This compilation simplifies such procedures.

JULIAN C. YODER

Appalachian State Teachers College

BOOKS AND PAMPHLETS RECEIVED

Conservation in the Americas, Nos. 13-14. Edited by Annette L. Flugger. Pan American Union, Washington, D.C., 1952-1953. 54 pages.

J. Brian Bird. **Southampton Island,** Geographical Branch Memoir 1. Department of Mines and Technical Surveys, Ottawa, 1953. viii and 84 pages with illustrations and index. $0.50.

Rand McNally **Regional Atlas,** abridged edition of Goode's **World Atlas.** Edited by Edward B. Espenshade, Jr. Rand McNally & Co., Chicago, 1953. 61 pages with index. $2.50.

George L. Proctor. **The Young Traveler in Sweden.** E. P. Dutton & Co., New York, 1953. 224 pages with illustrations and map, index and glossary. $3.00.

Collier's **World Atlas and Gazetteer,** Rand McNally edition. Rand McNally & Company, Chicago, 1953. viii and 472 pages. $17.50.

Colvin and Colvin. **Geography in our Modern World.** Cambridge Book Co., New York, 1953. xi and 434 pages with maps, graphs and index. $0.85 paper bound, $1.85 cloth bound.

Wotinsky, W. S. and E. S. Wotinsky. **World Population and Production Trends and Outlooks.** Twentieth Century Fund, New York, 1953. 1268 pages, 497 tables, 338 charts and maps, index. $9.00 until January 1, 1954; $12.00 thereafter.

Kreidler, William Lynn. **History, Geology and Future Possibilities of Gas and Oil in New York State.** University of New York, Albany, 1953. 58 pages with charts and bibliography.

The Ports of Chicago, Ill. Indiana Harbor, Ind., and Muskegon, Mich. Lake Series No. 7. U. S. Government Printing Office, Washington, D.C., 1953. $2.25.

Transportation Lines on the Atlantic, Gulf, and Pacific Coasts, 1953, Transportation Series No. 5. U. S. Government Printing Office, Washington, D.C., 1953. xxxiv and 462 pages. $2.50.

U. S. Navy Occupational Handbook for Women. Bureau of Naval Personnel, Washington 25, D.C., 1953. xiv and 72 entries with index.

U. S. Navy Occupational Handbook for Men. Bureau of Naval Personnel, Washington 25, D.C., 1953. xv and 73 entries with index.

N. K. Horrocks. **Physical Geography and Climatology.** Longmans, Green and Co., Inc., New York, 1953. xv and 368 pages with index. $3.50.

Heinrich Hassmann. **Oil in the Soviet Union.** Princeton University Press, Princeton, New Jersey, 1953. xvi and 173 pages with 19 maps and charts and 43 tables with index. $3.75.

World Guide. Selected and Adapted from The Columbia Lippincott Gazeteer of the World. Rand McNally, Chicago, 1953. ix and 726 pages with glossary and index $6.95.

Statistical Yearbooks. Card Division, Library of Congress, Washington 25, D.C. viii and 123 pages. $0.90.

Notes on the Industrialization of Texas, Series 1. Reprinted from the Texas Business Review. Bureau of Business Research, University of Texas, Austin, 1953. 20 articles with graphs and maps. $0.50.

Alfred G. Dale and Frank T. Cadena. **Economic Statistics of Texas, 1900-1952.** Business Leaflet No. 6. Bureau of Business Research, University of Texas, Austin, 1953. 25 pages. $0.25.

Stockton, Arbingast and Moore. **Water Requirements Survey, Red River Basin, Texas.** Bureau of Business Research, University of Texas, Austin, 1953. 178 pages with 7 maps and 4 charts. $2.00.

The Ports of Milwaukee, Manitowoc, and Green Bay, Wis., and Escanaba, Mich., Lake Series No. 8. Superintendent of Documents, Government Printing Office, Washington 25, D.C., 1953. 246 pages with illustrations and maps. $1.50.

Thurston and Hankins. **Homelands of the World.** Iroquois Publishing Co., New York, 1953. vii and 280 pages with index. $3.00.

Elsa Werner. **The Golden Geography,** A Child's Introduction to the World. Simon and Schuster, New York, 1952. 96 pages with index. $3.95.

EDITORIAL NOTES AND NEWS

The officers for 1953-54 in the California Council of Geography Teachers are: President, Alfred Butz, Santa Rosa Junior College; Vice-president, Bruce Ogilvie, Chico State College; Secretary-treasurer, John Ives, Santa Monica High School. Members at Large include Dave Lantis, Los Angeles City College; Chester Cole, Fresno State College; Homer Ashmann, Los Angeles State College, Robert Richardson, San Diego State College; John Kesseli, University of California; Lyle Gibson, San Francisco State College; and Clarissa Kimer, Caleb Greenwood School, Sacramento; Chester Cole was elected editor of the *Bulletin*.

According to a recent report, Japanese rice growing methods and Dutch windmills may become conspicuous features in the Indian landscape. The windmill is being used in an experiment in five farm communities. If successful, it may replace cattle and humans now used to lift water for irrigation.

It is reported that more than half of the molybdenum mined in the United States comes from the world's largest "moly" mine located near Climax, Colorado. This mine is located on the side of the Rocky Mountains more than eleven thousand feet above sea level. According to the same report, over 85 per cent of the world's annual molybdenum is produced in the United States.

If you have manuscripts aging in your files suitable for grades 1-3 or 4-6, why not take them out and reassess their potential publication?

Are you planning to attend the annual NCGT meeting in San Francisco in August, 1954?

Encyclopaedia Britannica Films, 1150 Wilmette Avenue, Wilmette, Illinois, has published its free "Mid-Year 1953 Previews," describing recent EBFilms.

Have you used any of the Life Filmstrips? You may receive order forms and other information by writing to Life Filmstrips, 9 Rockefeller Plaza, New York 20, New York.

According to a recent report a concentrated effort to develop practical large-scale means of turning sea water into fresh water is under way at the University of California.

Is our ultimate goal getting the right quality and quantity of water at the right place at the right time?

Are you planning to attend the NCGT meeting in California in August, 1954?

The need for expansion of the present network of weather-observing stations, especially in tropical areas, was considered by the Executive Committee of the World Meteorological Organization—a specialized agency of the United Nations—at a recent session in Geneva. Present facilities in tropical regions are insufficient to provide normal forecasting services as well as services for jet flights passing thru those areas, the Committee stated. The Executive Committee also approved a number of projects to promote standardization of weather-observing procedures and equipment, recommended that meteorological services carry out special studies of flood-producing storms, received a report that WMO technical assistance had developed significantly in the past year, and reviewed activities by WMO's six regional associations.